# SCIENCE ADVISORY BOARD

**Jane Lubchenco, Ph.D.**
Under Secretary of Commerce for Oceans & Atmosphere
NOAA Administrator
National Oceanic and Atmospheric Administration
July 16, 2012

# NOAA-wide:

## Leadership Changes, iPhones & iPads

**Dr. Becky Blank**
Acting Secretary Of Commerce

**Dr. David Titley**
Deputy Under Secretary For Operations

**Margaret Spring**
Principal Deputy Under Secretary for Operations

**Renee Stone**
Chief of Staff

**Dr. Jainey Bavishi**
Director of External Affairs

**Ciaran Clayton**
Director of Communications

**Laura Furgione**
Acting AA for NWS

**Joanne Benzuli-Crane**
Acting Chief Financial Officer

# RIO +20

DAS for International Fisheries Russell Smith led the NOAA delegation

- US Center Side Event: Sustainable Fisheries
- GEF  Side Event: Tuna Fisheries
- Global Oceans Forum Event: Fisheries panel
- US Center Side Event: Disaster Risk Reduction
- UNEP marine debris panel

OAR/PMEL's Richard Feely

- Oceans Day:  Panel on OA & Climate Change

International Coordinating Office for Ocean Acidification

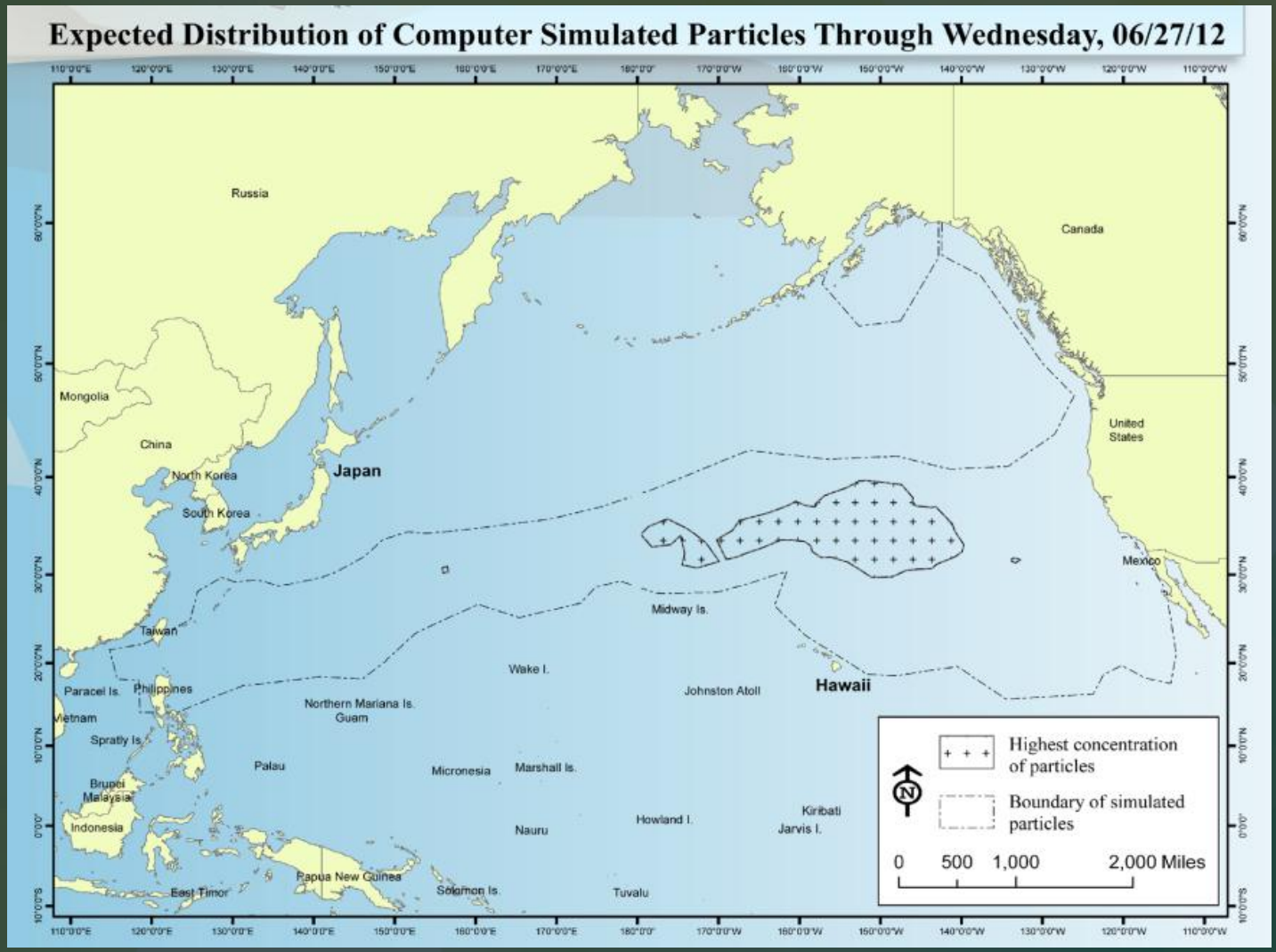
- IHT op-ed on OA by Lubchenco and Sir John Beddington
- Announcement of Int'l Monitoring Coordination Ctr: Monaco

# Line and Staff Offices and Cross-line Programs:

# Accomplishments & Challenges

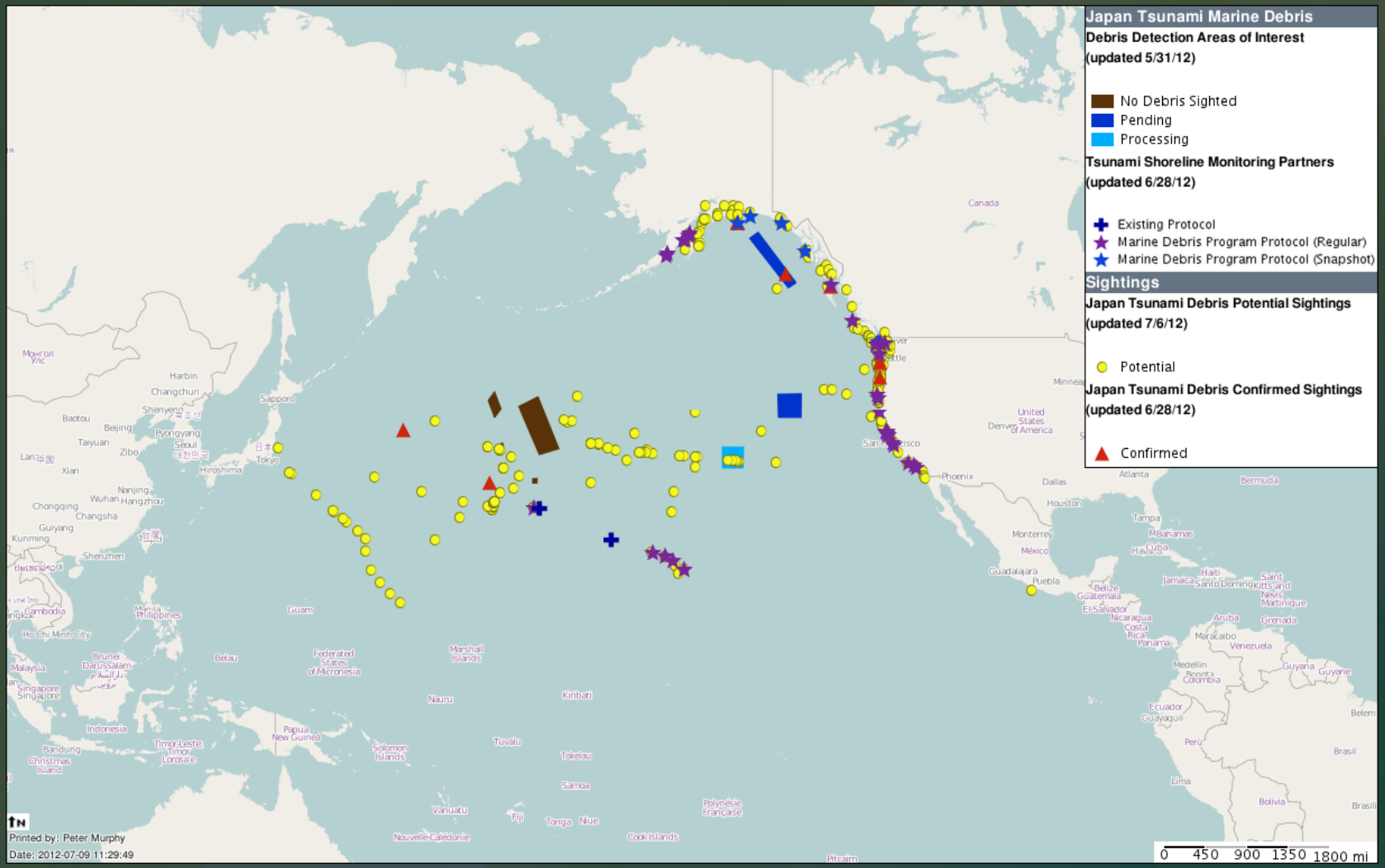
# Marine Debris GNOME Model

## NOS



# MARINE DEBRIS SIGHTINGS

## NOS



# MARINE DEBRIS DETECTION

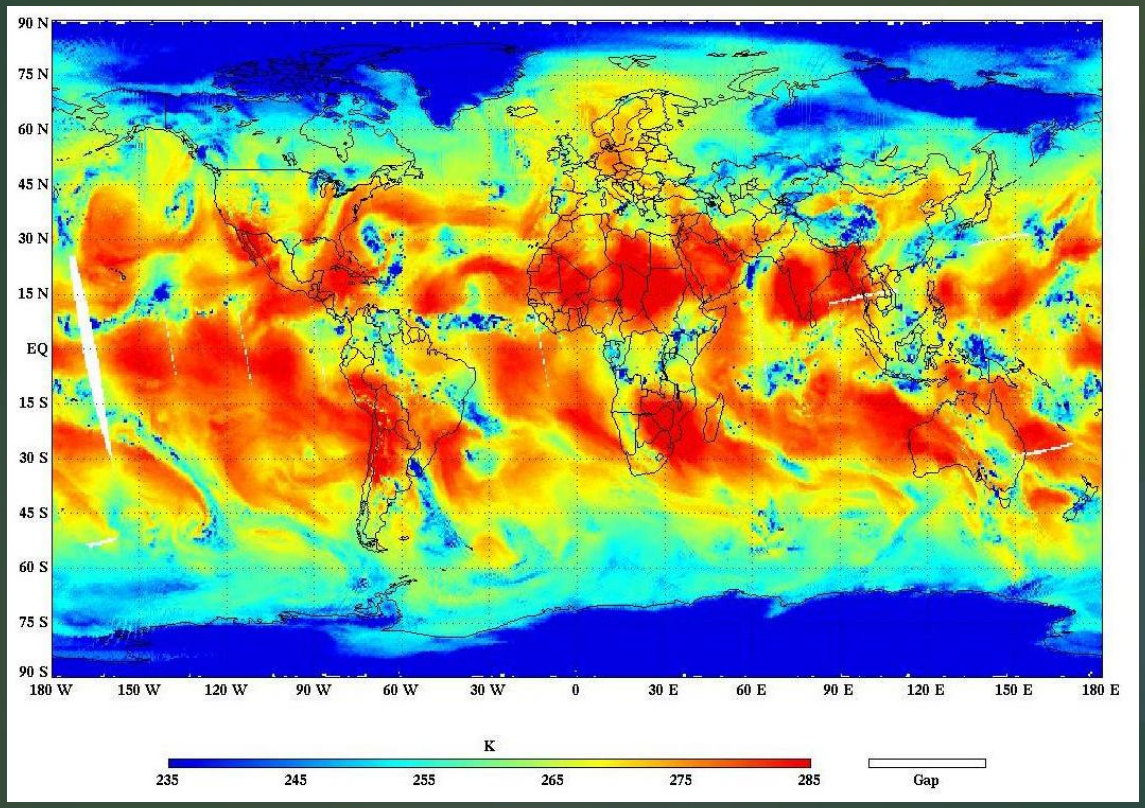
## NOS


**CHALLENGE**

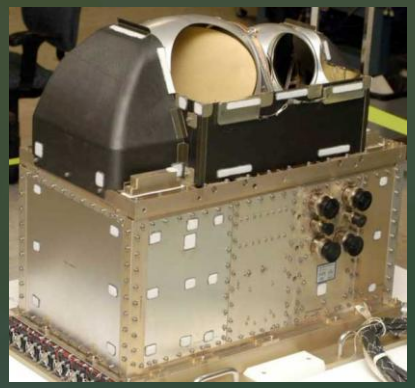
**Communicating Risks Accurately**

# SUOMI NPP OPERATIONS

## NESDIS




**ATMS channel 18 data, which measures water vapor in the lower atmosphere**



**ATMS Instrument**
Advanced Technology Microwave Sounder

## CHALLENGE

**Developing Satellite Architecture in Declining Budget Environment**

# EMBLEM, FINACES & FUTURE

## NWS

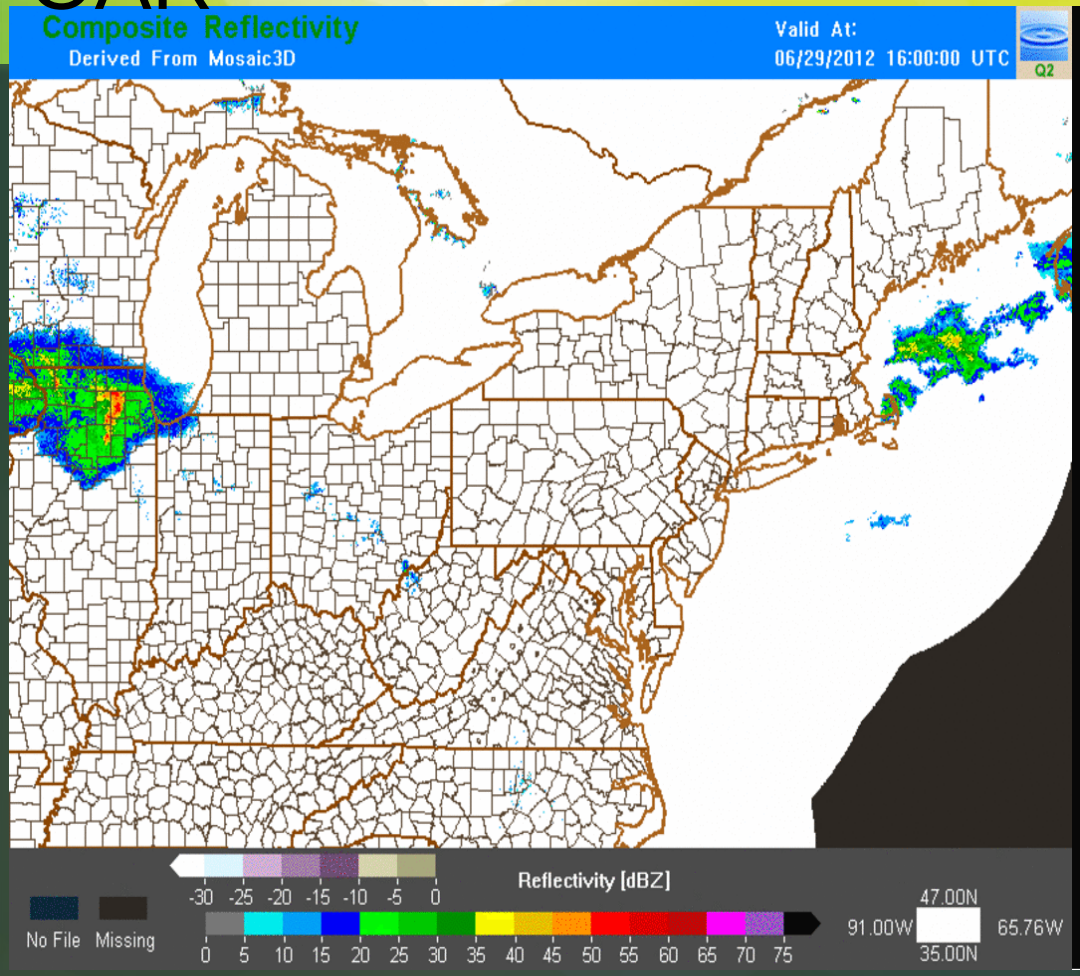
Emblem Licensing

Social Science Research
to Build a Weather Ready Nation

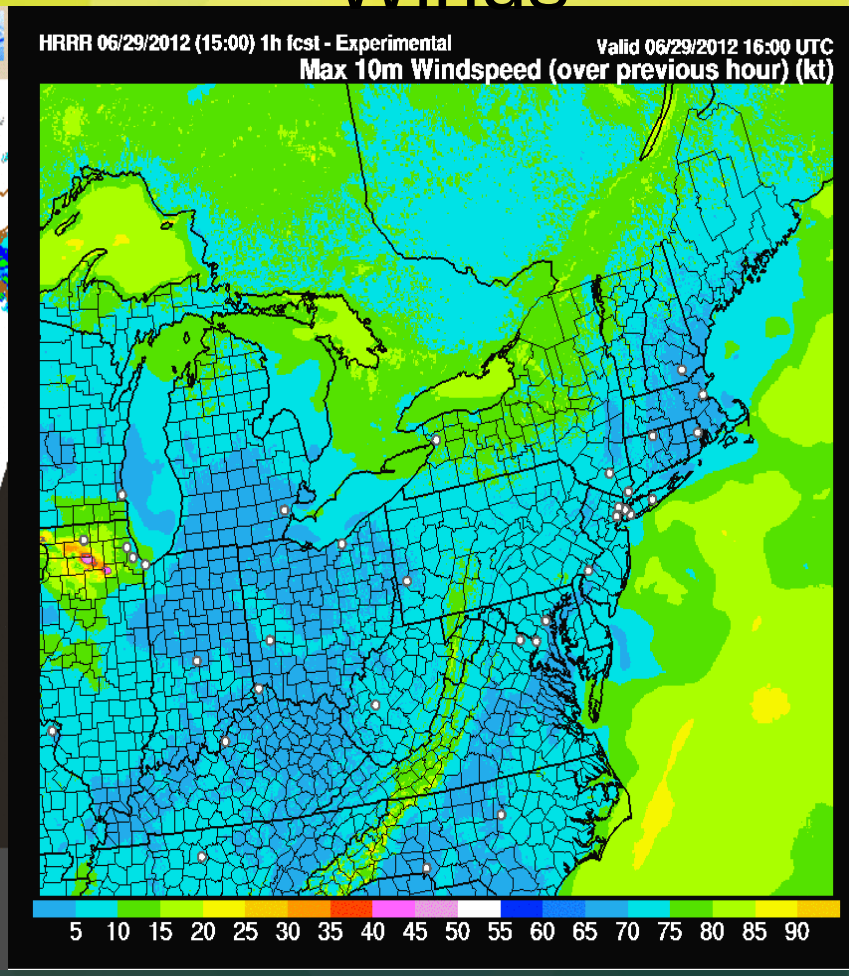

**CHALLENGE**

**Post Reprogramming: Charting the Future of the NWS**

# Observed Radar Reflectivity OAR



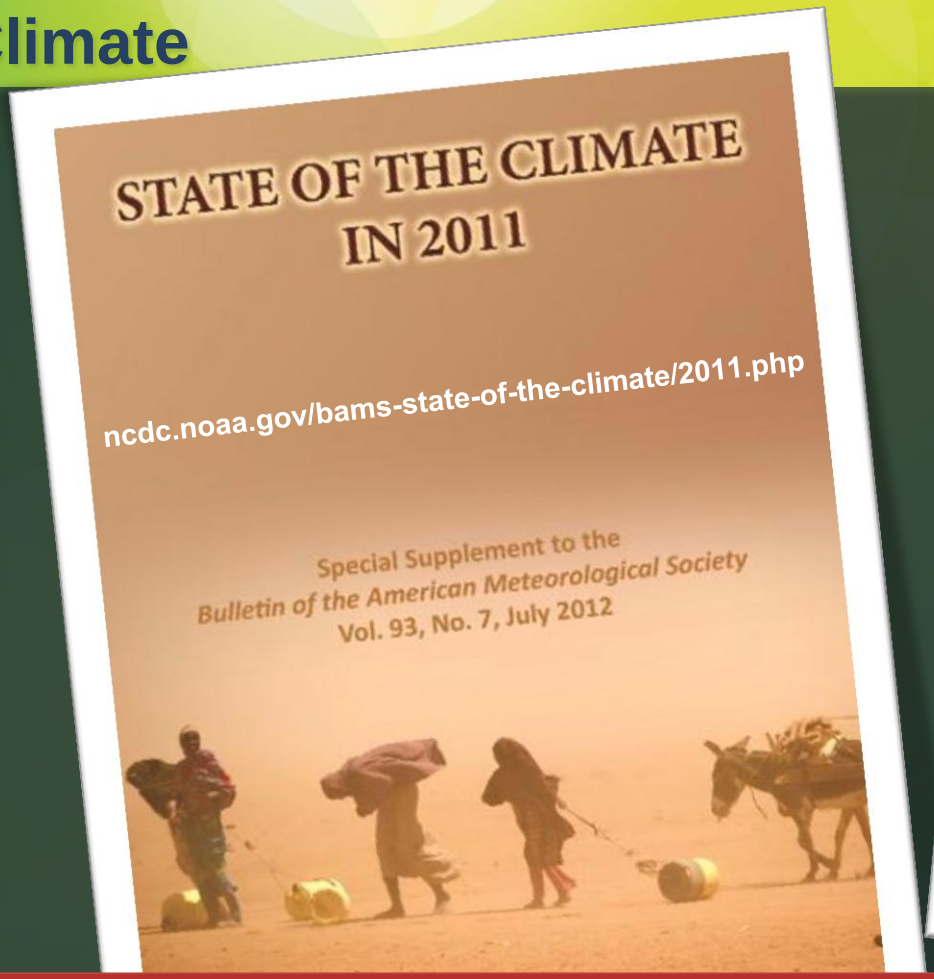

# Predicted Winds

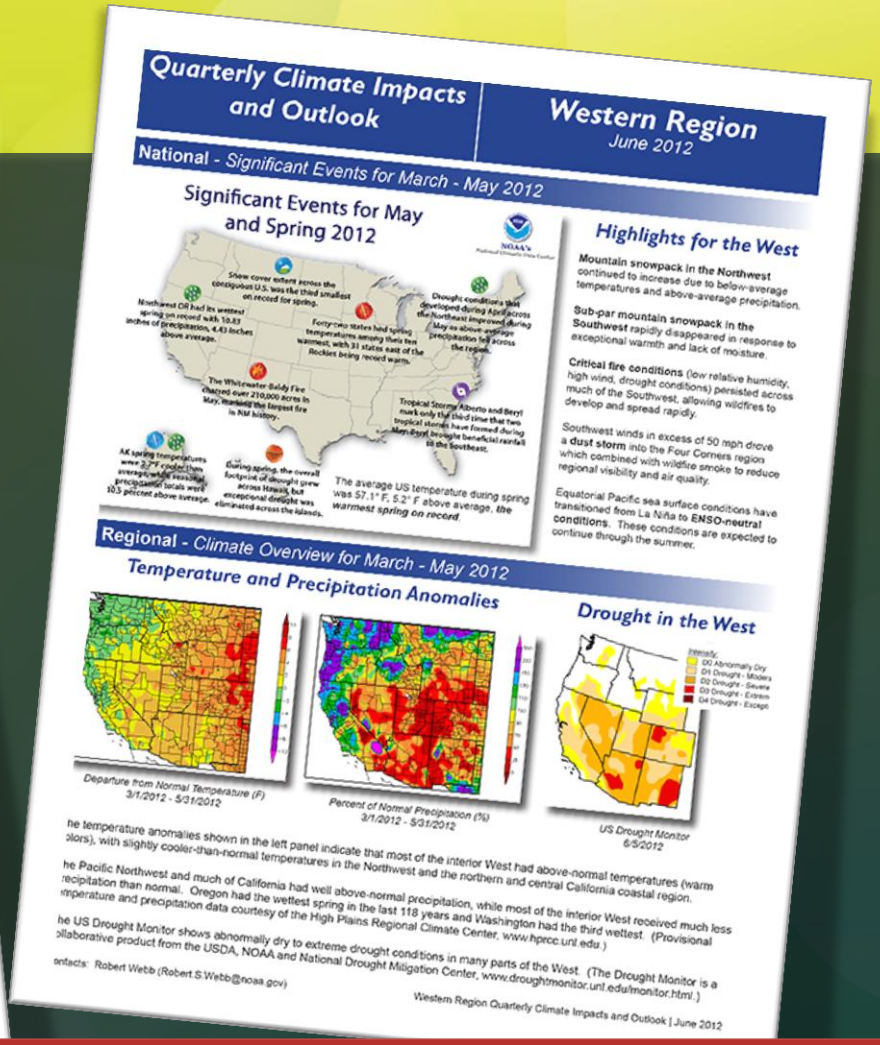



High Resolution Rapid Refresh Model run on ESRL Supercomputer

# STATE OF THE CLIMATE REPORT & NIDIS PRODUCTS

## Climate



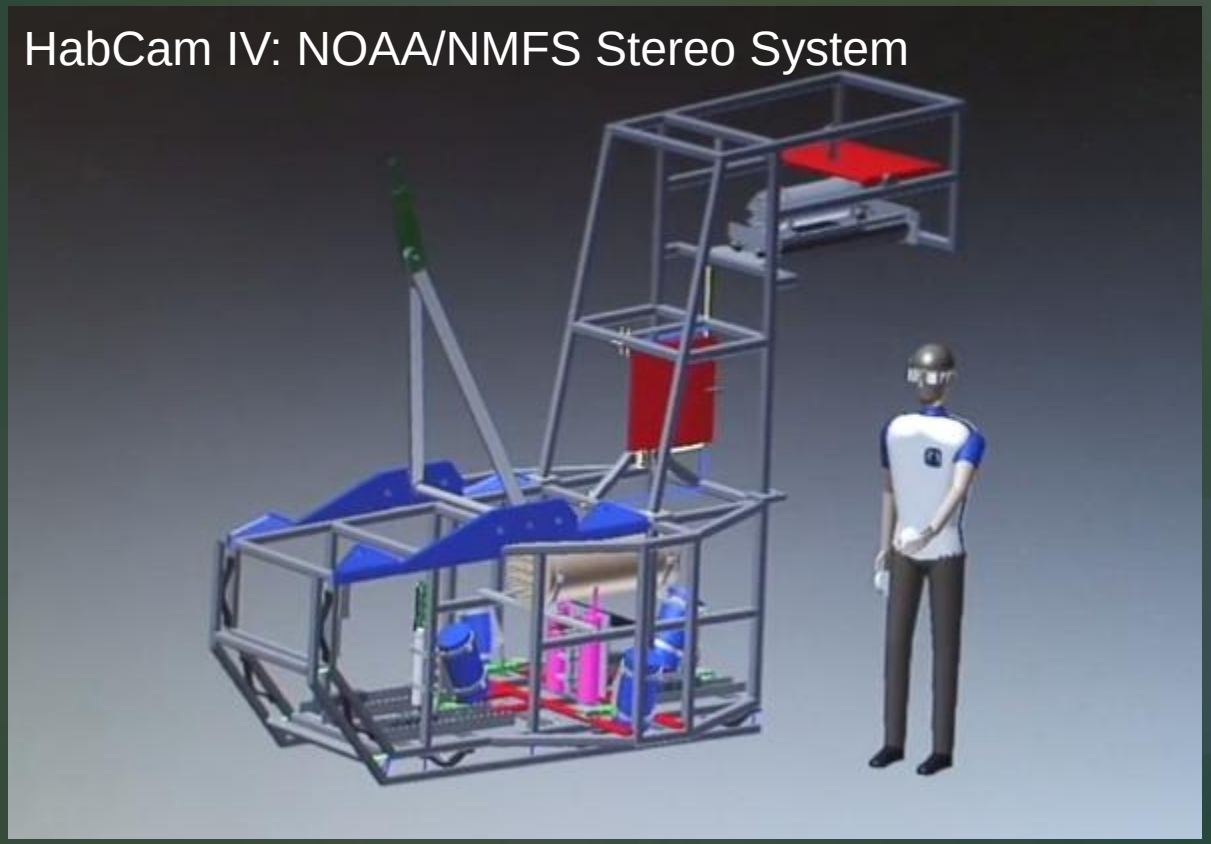



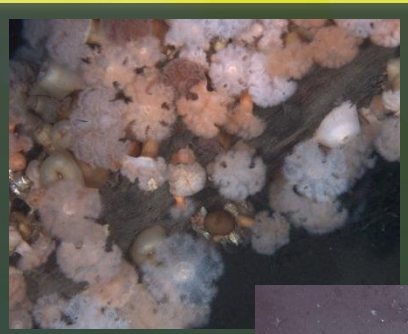

**CHALLENGE**

**Addressing the Societal Issues without a Climate Line Office**

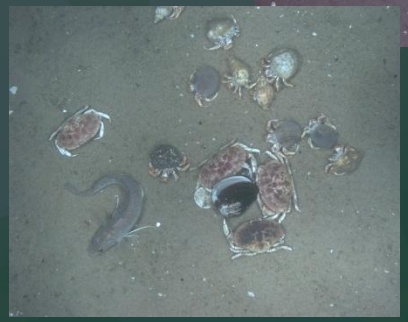
# ADVANCED SAMPLING TECHNOLOGIES

## NMFS



HabCam Imagery



**CHALLENGE**

**Improving and Funding Stock Assessments**

# NEW RESEARCH VESSELS & RISING COSTS

## OMAO

***Reuben Lasker***



**CHALLENGE**

**Rising ship maintenance and fuel costs**

# NextGen Standards & Recognition

## Education


**www.nextgenscience.org/next-generation-science-standards**

**CHALLENGE**

**Recognition as 'core' to NOAA's mission**

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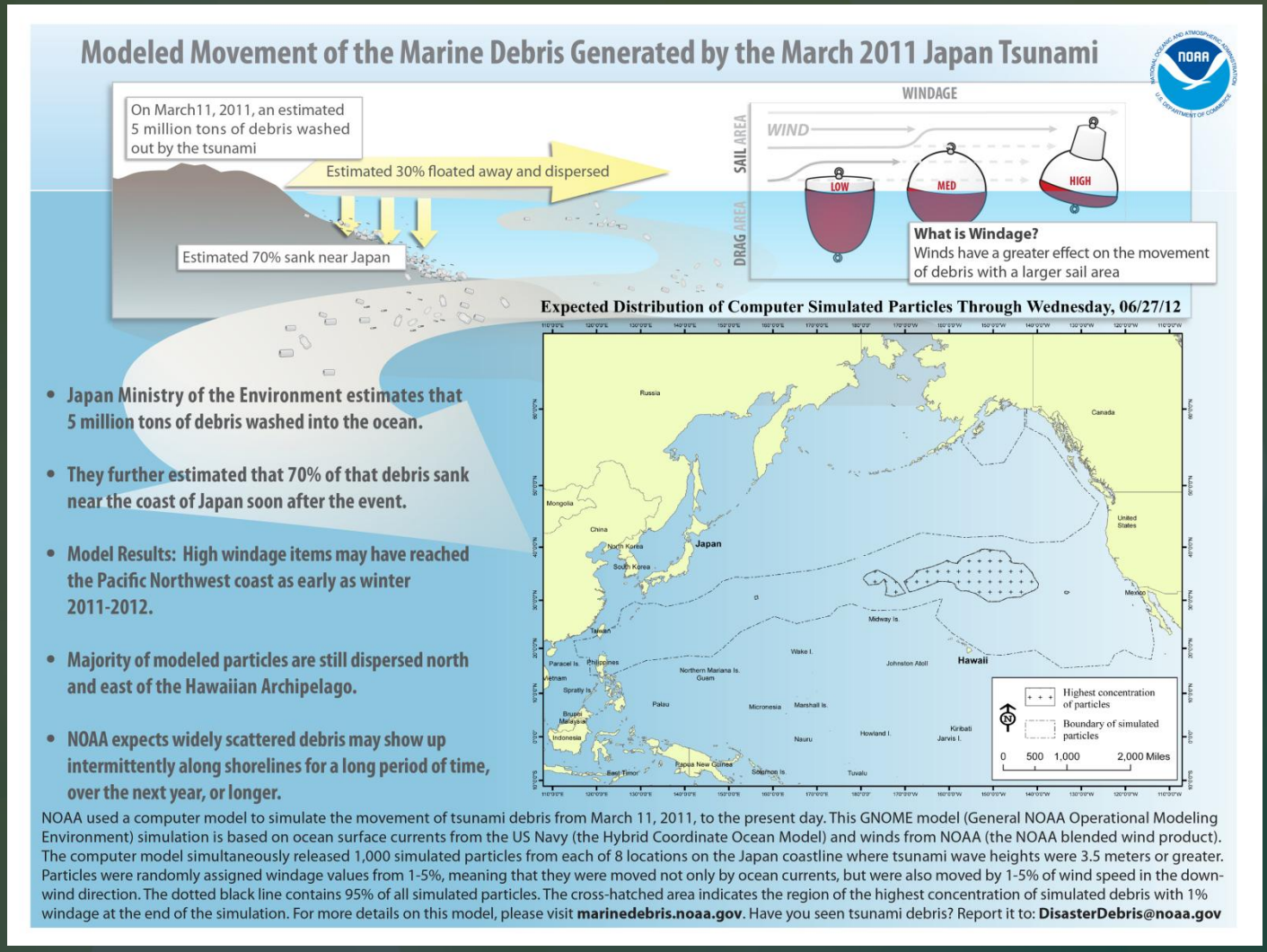
# Marine Debris GNOME Model




NOAA used a computer model to simulate the movement of tsunami debris from March 11, 2011, to the present day. This GNOME model (General NOAA Operational Modeling Environment) simulation is based on ocean surface currents from the US Navy (the Hybrid Coordinate Ocean Model) and winds from NOAA (the NOAA blended wind product). The computer model simultaneously released 1,000 simulated particles from each of 8 locations on the Japan coastline where tsunami wave heights were 3.5 meters or greater. Particles were randomly assigned windage values from 1-5%, meaning that they were moved not only by ocean currents, but were also moved by 1-5% of wind speed in the down-wind direction. The dotted black line contains 95% of all simulated particles. The cross-hatched area indicates the region of the highest concentration of simulated debris with 1% windage at the end of the simulation. For more details on this model, please visit **marinedebris.noaa.gov**. Have you seen tsunami debris? Report it to: **DisasterDebris@noaa.gov**

# High Resolution Rapid Refresh

A new weather prediction model being tested at:

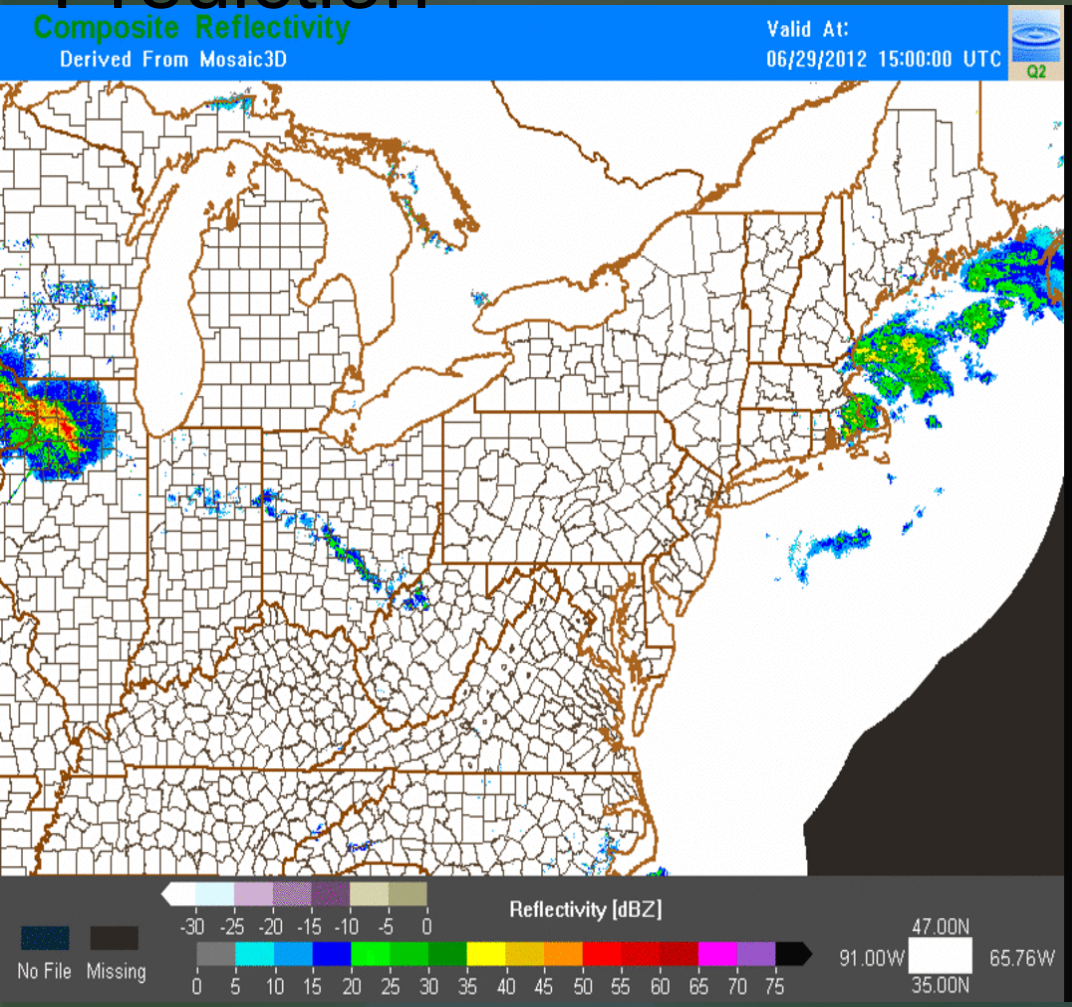
**Earth System Research Lab/**
**Global Systems Division**

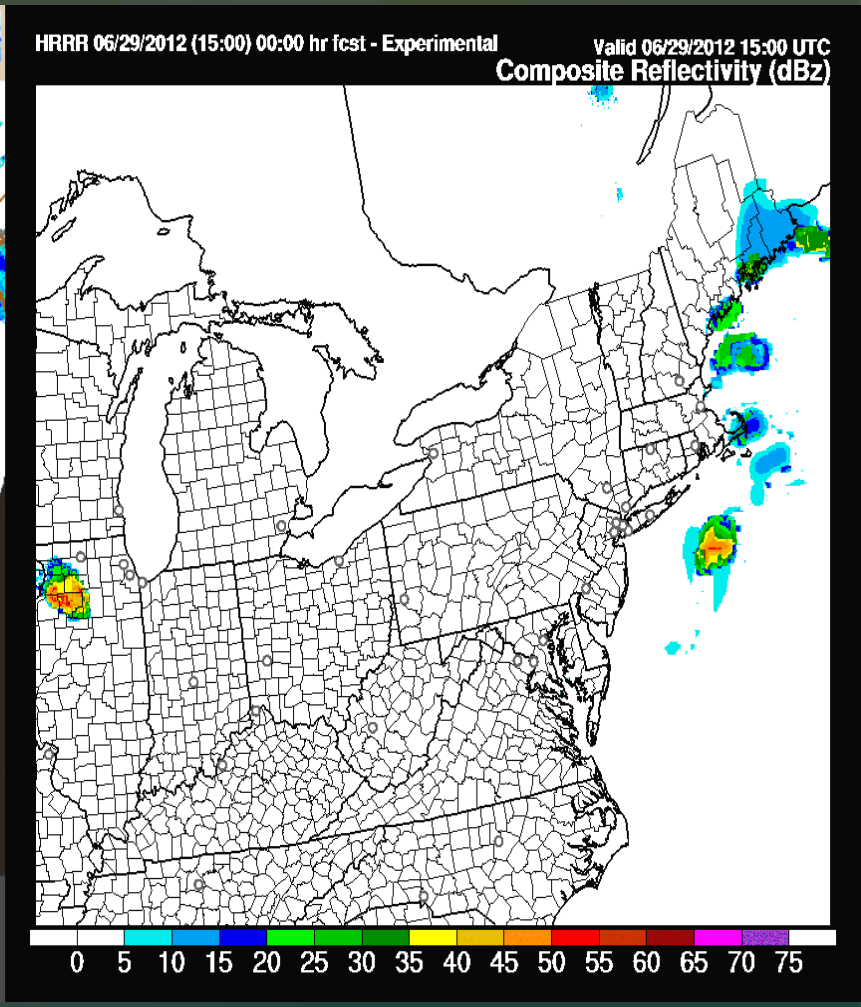
HRRR forecast skill for Mid-Atlantic Derecho case of 29-30 June 2012

Steve Weygandt and Stan Benjamin

# Observed Radar

# Model Prediction



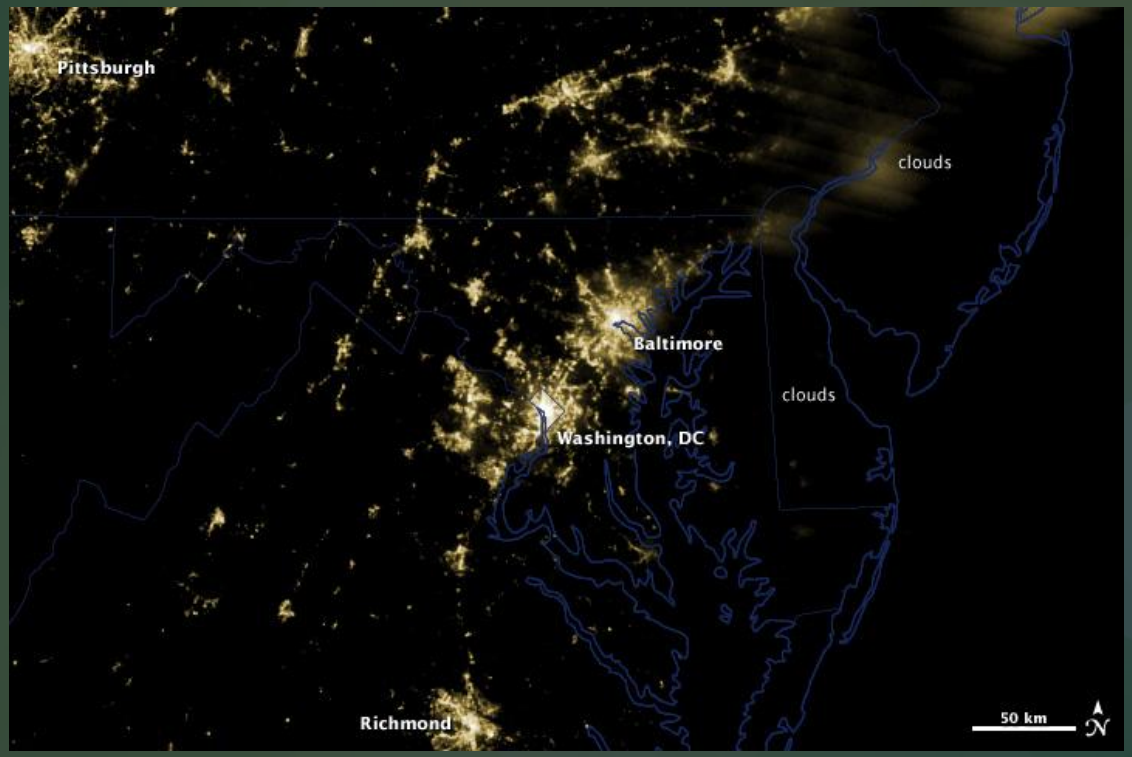



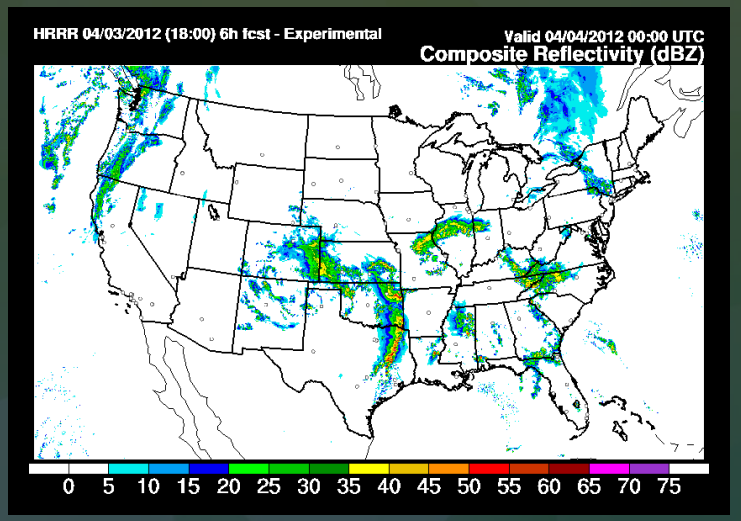

High Resolution Rapid Refresh Model run on ESRL Supercomputer

# MODELS & DATA

## OAR

Suomi Lights @ Night Image After Derecho Event




High Resolution Rapid Refresh Model Example

**CHALLENGE**

**Adequate data from observing systems**

ESRL/GSD's HRRR model predicted a 65 knot gust in the DC area 12 hours in advance.